Amendments to the Specification:

Please replace the title of the invention at page 1 with the following amended title:

METHOD OF CONTROLLING TEMPERATURE
DURING COATING DEPOSITION ~~DEPOSTITION~~ BY EBPVD

Please replace paragraph [0005] with the following amended paragraph:

[0005] A suitable thickness for a TBC is dependent in part on the thermal conductivity of the TBC material. While greater thicknesses are more thermally protective of the underlying substrate, the amount of TBC deposited on a component must often be limited to minimize weight, particularly for rotating components of gas turbine engines. Various approaches have been proposed for minimizing thermal conductivities of TBC's to allow for the use of thinner coatings without sacrificing thermal protection. For example, commonly-assigned U.S. Patent No. 6,447,854 ~~Application Serial No. 09/621,422~~ to Rigney et al. discloses an EBPVD process in which the coating chamber is maintained at a pressure as high as about 0.020 mbar to produce a TBC with reduced thermal conductivity.

Commonly-assigned U.S. Patent No. 6,342,278 to Rigney et al. discloses an EBPVD process for depositing TBC materials with reduced thermal conductivities, attributed to the coating chamber being maintained at pressures of about 0.010 mbar or more with an oxygen partial pressure of greater than 50%, preferably at or close to 100%.

Please replace paragraph [0006] with the following amended paragraph:

[0006] In addition to an initially low thermal conductivity, it is important that the thermal conductivity of a TBC remain low throughout the life of the component on which it is deposited. However, thermal conductivities of TBC materials such as YSZ have been observed to increase by 30% or more over time when subjected to the high temperatures within a gas turbine engine. This increase has been associated with microstructural instability, including coarsening of the zirconia-based microstructure through grain and pore growth and grain boundary creep. To compensate for this phenomenon, TBC's ~~TBC=s~~ for gas turbine engine components are often deposited to a greater thickness than would otherwise be necessary. Alternatively, internally cooled components such as blades and nozzles must be designed to have higher cooling flow.

Please replace paragraph [0016] with the following amended paragraph:

[0016] As is conventional, the preheat and coating chambers 12 and 14 are maintained at a subatmospheric pressure, preferable at a vacuum level of about up to 20 mbar in accordance with commonly-assigned U.S. Patent No. 6,447,854 ~~Application Serial No. 09/621,422~~ to Rigney et al. A pumping system 16, which may include mechanical, cryogenic and/or diffusion pumps of types known in the art, is employed to evacuate the preheat and coating chambers 12 and 14 (and the loading chamber). The desired deposition pressure is obtained by evacuating the preheat and coating chambers 12 and 14, and then introducing an inert gas (such as argon) and, optionally, oxygen into the chambers 12 and 14 until the targeted process pressure is obtained.